

smartsystems integration



International Conference and Exhibition
on Integration Issues of Miniaturized Systems

Conference program

Amsterdam, The Netherlands,
13–14 March 2013

smartsystemsintegration.com

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Welcome to Smart Systems Integration 2013

Smart Systems Integration 2013 is the international conference and exhibition on integration of materials, devices and systems. It started 2007 as European conference and exhibition and has now become a leading event at international level. It serves as a communication platform for academia, research and industry to exchange know-how on Smart Systems Integration.

The third generation of Smart Systems is currently world-wide under development. This generation will focus on smart home, smart city, smart production, smart mobility and internet of things as announced by a lot of current market studies. With the slogan »Smart is the new green« within their market studies Frost and Sullivan clearly showed the importance of Smart Systems for the whole mankind. In the future Smart Systems will be able to take over complex human perceptive and cognitive functions. Smart devices will frequently act unnoticeably in the background and intervene visibly only when human capabilities to act and to react are reduced or cease to exist. Examples for such Smart Systems and related integration challenges include object recognition devices for automated production systems, devices for monitoring the physical and mental condition of vehicle drivers, or integrated polymeric RFID systems for logistics packaging.

The power of worldwide Smart Systems research is represented by a number of strong big players as Bosch, Siemens, STMicroelectronics, Thales, EADS, Philips, General Electric, Honeywell or Sony which are powerful industrial drivers. High class public research structures, medium size private and public research entities as well as thousands of high-tech SMEs are forming a powerful backbone of technological excellence, creativity and innovation.

The 7th Smart Systems Integration conference SSI2013 addresses applications as well as aspects of basic research, and will show a snap shot of the international work in the field of Smart Systems Integration. Special emphasis is given to 3D-Integration and packaging, manufacturing of Smart

Systems as well as micro-nano-bio systems and smart medtech systems. For the second time the congress is co-located with the MEMS Executive Congress Europe of MEMS Industry Group, which takes place one day before SSI also in Amsterdam.

Like in previous years, EPoSS – the European Technology Platform on Smart Systems Integration – is organizing two special sessions on the first conference day. Both EPoSS Sessions will focus on the new strategic research agenda for Smart Systems Integration. A draft version will be presented and discussed in the first session. The second session is dedicated to the implementation of the new SRA, on the level of public authorities, industrial and research organizations, thus generating maximum benefit for the whole Smart Systems ecosystem.

To push forward the international activities and to promote co-operations of all players worldwide, two more special sessions are included in the programme. The first one is a tutorial from Starlab, which focuses on SMEs. The second one from MEMS Industry Group is a special US session for Smart Systems Integration 2013.



Prof. Dr. Thomas Gessner
Fraunhofer Institute for Electronic Nano Systems, Germany
Conference chair, Smart Systems Integration 2013

Knowledge exchange – trends & innovations – networking

Why to attend

The event features application-oriented as well as scientific sessions and addresses the complete value-added chain of Smart Systems. Moreover an overview of special European programs focusing on Smart Systems Integration is given.

The 2012 edition in Zurich was attended by more than 300 experts from 25 countries.

Who should attend

SSI targets researchers, developers and users in equal measure. It is the platform for Smart Systems Integration experts and managers from the automation, automotive, aerospace, telecommunications, medical technology, logistics, RFID and life sciences industry sectors.



Conference highlights

Keynotes by

- EPoSS
- European Commission
- Philips Research
- Micro Systems Technologies
- GE Sensing & Inspection Technologies

Special sessions by

- EPoSS
- MEMS Industry Group

Tutorial by

- Starlab

Co-location with MEMS Executive Congress Europe

Smart Systems Integration 2013 will be once again co-located with MEMS Executive Congress Europe held at the neighbouring Steigenberger Airport Hotel Amsterdam on 12 March 2013.

Pre-conference field trip to ESA

The pre-conference field trip taking place on 12 March 2013 is heading to the European Space Agency ESTEC in Noordwijk. Participants will gain an overview of ESA ESTEC, visit ESTEC Laboratories and the Space Expo museum.

Conference dinner

The traditional conference dinner is held at the »rodehoed« on 13 March 2013. The ride to the conference dinner contains a channel cruise including aperitif. During the conference dinner the Best Paper and Best Poster Award of SSI 2012 will be presented.

Registration to the pre-conference field trip as well as the dinner is required due to limited capacities!

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Conference program

Wednesday, 13 March 2013

Paris Charles de Gaulle 2+3

→ 8:45 hrs

Welcome

Prof. Dr. Thomas Gessner
Conference chair, Fraunhofer ENAS, DE

Paris Charles de Gaulle 2+3

→ 8:50 hrs

Keynote I

Smart Systems Integration:

A driver for innovation

Carmelo Papa, STMicroelectronics, EPoSS, CH

Paris Charles de Gaulle 2+3

→ 9:10 hrs

Keynote II

Smaller, Thinner, Smarter – System integration for a good future – The EU current and future actions

Khalil Rouhana, European Commission, BE

Paris Charles de Gaulle 2+3

→ 9:40 hrs

Keynote III

Active control in microfluidic systems

Prof. Dr. Jaap den Toonder, Philips Research Laboratories, NL

→ 10:15 hrs – 10:45 hrs Coffee break & exhibition

The special session by EPoSS, the poster presentations and the exhibition are free of charge to all participants, exhibitors and registered visitors.

London Heathrow 3

System integration and packaging

Chairmen: Rolf Aschenbrenner, Fraunhofer IZM, DE;
Dr. Maaïke Op de Beeck, IMEC vzw, BE

→ 10:45 hrs

Development of 3D Integrated SiP using embedded active/passive chips in PCB and external parts

Dr. Michel Brizoux, THALES Global Service, FR

→ 11:10 hrs

Hybrid assembly of micro scanner arrays with large aperture and their system integration

Dr. Thilo Sandner, Fraunhofer IPMS, DE

→ 11:35 hrs

Low temperature wafer bonding technology for RF based MEMS devices

Marco Haubold, Fraunhofer ENAS, DE

→ 12:00 hrs

An integrated-optical interferometer with combined photodiode/fibre pigtail assembly

Eric Markweg, Ilmenau University of Technology, DE

London Heathrow 6

Advanced technology and reliability

Chairmen: Prof. Dr. P. J. French, Delft University of Technology, NL; Thomas Stärz, microfab Service, DE

→ 10:45 hrs

Advances in Reliability Research by Means of Crack Avoidance Strategy

Prof. Bernd Michel, Fraunhofer ENAS, DE

→ 11:10 hrs

Distortion Measurements and Simulations on Mechanically Stressed Bare Die MEMS Gyroscopes

Markus Dorwarth, Robert Bosch, DE

→ 11:35 hrs

Inkjet-Printed Functionalities for Microfluidic Lab-on-a-Chip Systems

Dr. Erik Beckert, Fraunhofer IOF, DE

→ 12:00 hrs

Wafer-level technology for piezoresistive electro-mechanical transducer based on Carbon Nanotubes

Dr. Sascha Hermann, Chemnitz University of Technology, DE

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Paris Charles de Gaulle 2+3

EPoSS Session I:

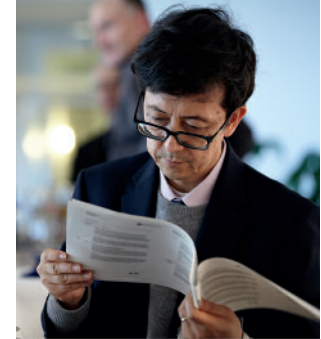
A new strategic research agenda for Smart Systems Integration: markets, technologies, processes

→ 10:45 hrs – 12:25 hrs

The new EPoSS Strategic Research Agenda (SRA) has been developed using a rigorous process that involved

- a large-scale Smart Systems stakeholder survey asking about markets served, technologies used, turnover and headcount, funding and grants, drivers, difficulties, support and assistance
- in-depth expert surveys and interviews for each application sector, technology and production process
- a series of expert workshops on timelines, impact, SWOT and priority setting.

In this first EPoSs Session, co-developers and supporters from key industries will present the first draft of the new EPoSs SRA in their own application sectors. Participants are invited to discuss, comment upon and contribute actively to the SRA.



→ 12:25 hrs – 13:30 hrs Lunch break & exhibition

Conference program

Wednesday, 13 March 2013

London Heathrow 3

3D-Integration and interconnect technologies I

Chairmen: Rainer Guenzler, HSG-IMIT, DE; Salvatore Coffa, STMicroelectronics, IT

→ 13:30 hrs

Challenges and Methods for the Design of 3D-Integrated Smart Systems

Uwe Knöchel, Fraunhofer IIS/EAS, DE

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→ 13:55 hrs

Photo definable polyimide based Flat UTCP technology for 3D-stacking application

Swarnakamal Priyabadini, Centre for Microsystems Technology, BE

→ 14:20 hrs

Silicon Interposers with TSVs – A basis for Wafer Level 3D System Integration

Kai Zoschke, Fraunhofer IZM, DE

→ 14:45 hrs

Vertical Integration techniques for MEMS devices using high-AR TSV

Lutz Hofmann, Fraunhofer ENAS, DE

→ 15:10 hrs

Hybrid microassembly for 3D integration and heterogeneous integration – FP7 Project FABZASM

Quan Zhou, Aalto University, FI

London Heathrow 3

3D-Integration and interconnect technologies II

Chairmen: Prof. Klaus-Dieter Lang, Fraunhofer IZM, DE; Prof. Hercules Pereira Neves, IMEC, BE

→ 17:00 hrs

Thin-film based stretchable electronic technologies

Rik Verplancke, Ghent University – IMEC, BE

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→ 17:25 hrs

Interflex: reliable integration technologies for building a system-in-foil

Dr. Erwin Yacoub-George, Fraunhofer EMFT, DE

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→ 17:50 hrs

JEMSIIP_3D: Major results & achievements from the project and exploitation thereof in future products

M. Jürgen Wolf, Fraunhofer IZM, DE

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→ 18:15 hrs

InP-Si BiCMOS Hetero Integration for broadband radio links

Dr. Marco Lisker, IHP – Leibniz Institut für innovative Mikroelektronik, DE

London Heathrow 3

Micro and nano systems and components

Chairmen: Dr. Michael Scholles, Fraunhofer IPMS, DE; Dr. Reinhard Neul, Robert Bosch, DE

→ 13:30 hrs

Compact double monochromator system based on tunable MEMS gratings

Dr. Marco Lützelshwab, CSEM, CH

→ 13:55 hrs

Miniature Fourier transform infrared spectrometer for multi gas detection

Tanahashi Tatsuyui, Tohoku University, JP

→ 14:20 hrs

Multi-sensors modules in SiGe-MEMS technology

Dr. Harrie Tilmans, IMEC, BE

→ 14:45 hrs

Sensors for Cyber Chemical Systems

Prof. Dr. Yvonne Joseph, Technical University Bergakademie Freiberg, DE

→ 15:10 hrs

Adaptive antenna tuners for mobile phones

Erwin Spits, EPCOS Netherlands, NL

London Heathrow 6

Smart power, smart grids

Chairmen: Dr. Christian Hedayat, Fraunhofer ENAS, DE; Dr. Guenter Lugert, Siemens, DE

→ 17:00 hrs

Smart Energy Agents as an Enabler for Smart Distribution Grids

Dr. Michael Metzger, Siemens, DE

→ 17:25 hrs

Optical Power Supply for Sensor Nodes in Intelligent Sensorial Materials

Christoph Budelmann, DFKI, DE

WINNER
BEST POSTER
AWARD 2012

→ 17:50 hrs

Rechargeable Micro Fuel Cells as Power Supply for Smart Microsystems

Dominik Zimmermann, Micronas, DE

WINNER
BEST PAPER
AWARD 2012

→ 18:15 hrs

ARTEMIS ME3Gas open source middleware platform inter-operability retrofit pilot

Mike Hayes, Tyndall National Institute, IE

Paris Charles de Gaulle 2+3

EPoSS Session II:

Implementing the new EPoSS SRA: policy recommendations and industrial roll-out

→ 13:30 hrs – 15:35 hrs

In order for the whole Smart Systems ecosystem to take maximum advantage of the SRA for Smart Systems Integration, EPoSS is implementing a multi-strand approach for its roll-out, covering

- funding programs at the level of EU, national and regional authorities,
- the R&D&I level of all stakeholder organizations, from SMEs and large industry to public research and academia,
- all steps of the Smart Systems value chain, from design to manufacture,
- the level of skills development, e.g. through education, training and expert exchange

This second EPoSS Session will include presentations on

- Smart Systems as part of Horizon 2020 and targeted support measures such as the European Green Vehicles Initiative,
- reaching out to and engaging with national and regional authorities and with Smart Systems clusters and networks,
- maximising interaction with stakeholders – from those already involved in Smart Systems, e.g. in EU-funded take-up projects – to new user communities, such as the service industries and the flexible, organic and large-area electronics community.

Part of the EPoSS Session

Smart Systems Integration for Infrastructure Monitoring: Technology and Applications

Roger H. Grace, Roger Grace Associates, US

→ 15:35 hrs Coffee break & exhibition

→ 16:00 hrs – 17:00 hrs POSTER SESSION

The poster presenters will be available at their posters for questions and discussions.

Paris Charles de Gaulle 2+3

Tutorial:

Future opportunities for SME in Smart Systems R + I

Dr. Anna Puig-Centelles, Starlab Barcelona, ES; Dr. Chris Merveille, IKERLAN-1K4, ES; Dr. Luis Fonseca, CNM-CSIC, ES; Thomas Köhler, VDI/VDE-IT, DE

→ 17:00 hrs – 18:35 hrs

Currently there are many SMEs that work with Smart Systems that do not profit from European Union resources. Approaches have to be developed to encourage these players to take advantage of European support programmes and market engagement opportunities in Smart Systems. **Funding:** Funding prospects for SMEs in Horizon 2020.

Technological alignment: H2020 perspective and elements of the EPoSS Strategic Research Agenda (SRA) that are relevant for bringing the SMEs into the value chain.

Round table: How to increase SME presence in the Smart System value chain? How to improve SME involvement in Smart Systems research and innovation? How a useful on-line match-making tool should be?

Networking: Clusters and technological platforms.

Success stories: Showcases from SMEs going from research to products.

→ 20:00 hrs – 23:30 hrs
Conference dinner
Busses to the conference dinner
leave at 19:00 hrs.

Conference program

Thursday, 14 March 2013

Paris Charles de Gaulle 2+3

→ 9:00 hrs

Keynote IV

Manufacturing of Smart Medical Devices

Michael Fink, Micro Systems Technologies

Management, CH

Paris Charles de Gaulle 2+3

→ 9:30 hrs

Keynote V

Brian Wirth, GE – Sensing & Inspection Technologies, US

gistics, US

→ 10:00 hrs – 10:25 hrs Coffee break & exhibition

The poster presentations and the exhibition are free of charge to all participants, exhibitors and registered visitors.

Paris Charles de Gaulle 2+3

Manufacturing technologies for smart integrated systems I

Chairmen: Dr. Sywert Brongersma, Holst Centre, NL; Dr. Stefan Finkbeiner, Bosch Sensortec, DE

→ 10:25 hrs

Flexible and Stretchable Electronics and Applications for Biomedical Devices

Prof. Dae-Hyeong Kim, Seoul National University, KR

→ 10:50 hrs

Integration techniques and applications of thin chips on low cost foil substrates

Daan van den Ende, Holst Centre/TNO, NL

→ 11:15 hrs

Multi-Sensor Stacking using Mold Embedding Processes

Karl-Friedrich Becker, Fraunhofer IZM, DE

→ 11:40 hrs

Development of a biocompatible encapsulation & interconnect technology for implantable electronics

Dr. Maaïke Op de Beeck, IMEC, BE

→ 12:05 hrs

A hybrid Elastomer-MEMS high stroke actuator for a tactile graphical display

Dr. Jacek Baborowski, CSEM, CH

London Heathrow 3

Smart medtech systems and systems for prognostic health

Chairmen: Dr. Chris Merveille, IKERLAN, ES; Uwe Schwarz, X-FAB, DE

→ 10:25 hrs

Novel piezoelectric harvester for cardiac implants: Design, Optimisation & Fabrication

Renzo Dal Molin, Sorin CRM, FR

→ 10:50 hrs

Wireless Smart Glove for arthritis rehabilitation

Brendan O'Flynn, Tyndall National Institute, IE

→ 11:15 hrs

Wearable Smart Systems for Personal Healthcare and Lifestyle

Dr. Ruud Vullers, Holst Centre, NL

→ 11:40 hrs

A Flexible Micro-Electrode Array with an Embedded Flexible CMOS-Chip for Medical Applications

Nadine Winkin, RWTH Aachen, DE

→ 12:05 hrs

The integrated micro optical sensor for photometry and fluorescence applications

Martin Baca, Ilmenau University of Technology, DE

London Heathrow 6

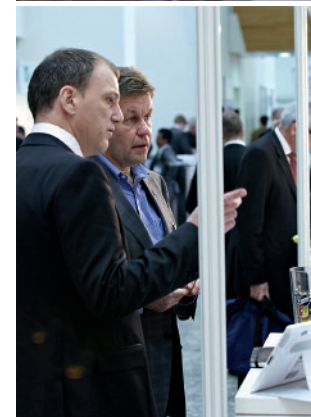
US Session:

MEMS Industry Group

Chair: Karen Lightman, MEMS Industry Group, US

→ 10:25 hrs – 12:30 hrs

Organized and hosted by MEMS Industry Group (MIG), the trade association focused on growing the global MEMS market, this conference session composed of companies based in the United States, will discuss how sensor fusion—the intelligent combination of data from several sensors for the purpose of improving application or system performance—has the MEMS industry abuzz with promise. With potentially attractive benefits that include the ability to meet or exceed power, performance, and cost requirements in heterogeneous embedded systems—including mobile handsets and tablets—sensor fusion is moving rapidly into the commercialization phase.



→ 12:30 hrs – 13:30 hrs Lunch break & exhibition

→ 13:30 hrs **POSTER SESSION**

The poster presenters will be available at their posters for questions and discussions.

→ 14:00 hrs – 14:30 hrs Coffee break

Conference program

Thursday, 22 March 2012

Paris Charles de Gaulle 2+3

Manufacturing technologies for smart integrated systems II

Chairmen: Dr. André van Geelen, EPCOS Netherlands, NL; Prof. Jussi Tuovinen, VTT, CEA-Léti, FI

→ 14:30 hrs

PiezoMEMS for High Intensity Focused Ultrasound

An Nguyen-Dinh, Vermon, FR

→ 14:55 hrs

Integration of Multi-level MOEMS Structure on CMOS for Spatial Light Modulators

Matthias List, Fraunhofer IPMS, DE

→ 15:20 hrs

Absolute Pressure Sensors made by Anodic Bonding

Konstanze Schmidt, X-FAB Semiconductor Foundries, DE

→ 15:45 hrs

Manufacturing Technologies for Integrated Smart Systems: a Primer

Prof. Marc Desmulliez, Heriot-Watt University, UK

→ 16:10 hrs End of the conference

London Heathrow 3

Micro-Nano-Bio systems applications

Chairmen: Dr. Maurice van der Beek, Philips Research, NL; Dr. Markus Riestler, maris TechCon, AT

→ 14:30 hrs

Sensors for human-machine-interfaces in smart medical systems – Integration challenges and solutions

Dirk Fengels, CSEM, CH

→ 14:55 hrs

Microfluidic integration: what options do we have and what does it mean?

Henne van Heeren, enablingMNT, NL

→ 15:20 hrs

Cellenc: human cell encapsulation in closed loop microfluidic chip

Dr. Patrick Boisseau, CEA, FR

→ 15:45 hrs

Self-powered microfluidic platform for autonomous amperometric sensing

Dr. Juan Pablo Esquivel, Centre Nacional de Microelectrónica (CNM-CSIC), ES

London Heathrow 6

Advanced sensor technologies/ Sensor networks

Chairmen: Andreas Nebeling, EL MOS Semiconductor, DE; Dr. Alessandro Bassi, HITACHI Europe, FR

→ 14:30 hrs

MEMS Technology for Consumer Electronics

Dr. Stefan Finkbeiner, Bosch Sensortec, DE

→ 14:55 hrs

Smart MEMS systems for automotive safety

Marc Osajda, Freescale Halbleiter, DE

→ 15:20 hrs

Autonomous Visual Sensors for safety and security

Dr. Zeev Smilansky, Emza Visual Sense, IL

→ 15:45 hrs

Wireless Sensors Networks in Electromagnetically and Physically Hostile Environments

Anders Rydberg, University of Uppsala, SE



Full description of the presentations as well as biographies of the speakers are available at www.smartsystemsintegration.com/program



Poster session

This session takes place on both conference days and is free of charge to all participants, exhibitors and registered visitors!

→ 13 March 2013, 16:00 hrs – 17:00 hrs

→ 14 March 2013, 13:30 hrs – 14:30 hrs

An intelligent modular tool for the monitoring and control of high efficient grinding processes
Oliver Adams, Laboratory for Machine Tools and Production Engineering, DE

Generic process for low-cost InP integrated photonics in industrial foundries
Dr. Luc Augustin, TU Eindhoven, NL

Robot Manipulator with emergent Behaviour supported by a Smart Sensorial Material and Agent Systems
Dr. Stefan Bosse, University of Bremen, DE

CO₂ sensor system for mobile application
Dr. Jamila Boudaden, Fraunhofer EMFT, DE

New solution addresses energy measurement challenges related to wireless devices driven by microharvester
Carlo Canziani, Agilent Technologies, IT

Comparison of various polymer-based dry electrodes for high quality EEG/ECG measurements
Yun-Hsuan Chen, IMEC, BE

Investigations on Eutectic Bonding of Polyimide Structures for MEMS Applications
Tom Creutzburg, Leibniz University Hannover, DE

Technology Development for Packaging of the GMR-Sensor via Eutectic Bonding
Dr. Srecko Cvetkovic, Leibniz University Hannover, DE

Picosecond Laser Micromachining in the context of MEMS/NEMS applications
Tom Enderlein, Chemnitz University of Technology, DE

Investigation of structuring and magnetizing of spintronic layer stacks using laser irradiation
Prof. Dr. Horst Exner, Hochschule Mittweida, DE

Multi-sensor module for the measurement of pressure, temperature, flow rate and concentration in microreaction technology
Thomas Frank, CIS Research institute for micro sensors and photovoltaic, DE

Miniaturized frequency doubled DPSS assembled using solderjet bumping technology
Marta Gilaberte Basset, Monocrom, ES

Barriers to the Commercialization of MEMS : The 2012 MEMS Industry Commercialization Report Card
Roger H. Grace, Roger Grace Associates, US

Stress Relief Technologies for Laser Diced Wafers
Dr. Jürgen Grafe, Fraunhofer IZM, DE

Actuator net design for morphing wing structure
Dipl. André Gratias, Fraunhofer ENAS, DE

Studies on the piezoresistive effect in MOS transistors for use in integrated MEMS sensors
Haas Sven, Chemnitz University of Technology, DE

Inkjet Printing of Microsieves and Reinforcing Patterns for Fragile Microsieves
Jens Hammerschmidt, Chemnitz University of Technology, DE

Tomorrow's Telemetering Today: Citizen Observatory Approach with Micro Sensors and Smart Prognostics
Dr. Dieter Hayn, AIT Austrian Institute of Technology, AT

Fiber Optics in Arc Flash Detection Applications
Alekh Indra, Avago Technologies, SG

Cyber Chemical Systems – Sensors and Information Processing
Prof. Dr. Yvonne Joseph, Technical University Bergakademie Freiberg, DE

SmartSenior TP6 – a multifunctional wristband supports living at home
Jin-U Kim, Fraunhofer IZM, DE

Integration of MEMS/NEMS models at the system level using VHDL-AMS
Dr. Vladimir Kolchuzhin, Chemnitz University of Technology, DE

Autonomous Micro-platform for Multi-sensors (AMM) for wireless monitoring
Dr. Philippe Laurent, MICROSYS University of Liege, BE

Design and simulation of nanomaterial-enhanced LTCC integrated inductors
Dr. Yu-Ching Lin, Tohoku University, JP

System Design of Double Wall Synthetic Jet Actuators
Mathias Lipowski, Fraunhofer ENAS, DE

Influence of DMSO and MWCNTs addition on the thermoelectric properties of PEDOT:PSS Thin Films
Jinji Luo, Chemnitz University of Technology, DE

A Specification tool for Nanosystems
Dr. Erik Markert, Chemnitz University of Technology, DE

Integration of a position photodiode for a micro laser tracker system
Eric Markweg, Ilmenau University of Technology, DE

Optical sensor for flow measurements in capillaries
Dr. Ralf Müller, CIS research institute for micro sensors and photovoltaic, DE

Development of Novel Micro Conveyors by Using Piezoelectric Vibration Stages
Prof. Chi Hsiang Pan, National Chin-Yi University of Technology, TW

Via-Last technology for the interconnection of flash and processor chip for mobile applications
René Puschmann, Fraunhofer IZM, DE

Laterally stacked organic devices fabricated by trench technology
Dr. Danny Reuter, Chemnitz University of Technology, DE

M&NEMS: a technological platform for 10-axis sensor
Dr. Philippe Robert, CEA-Léti, FR

Package Characterization with Stress Chip Measurements for Health Monitoring
Florian Schindler-Saefkow, Fraunhofer ENAS, DE

Joint Technology Initiative Clean Sky – Aims for greener Aviation
Martin Schueller, Fraunhofer ENAS, DE

Comprehensive analysis of power consumption
Amit Shah, E-Senza Technologies, DE

Inkjet-printed electronics: Transfer from lab to fab manufacturing
Enrico Sowade, Chemnitz University of Technology, DE

Evaluation of the Generated Energy by Non-Harmonic Movement of a Permanent Magnet near a Coil
Dr. Nobby Stevens, Catholic University, BE

Optimization of MEMS/NEMS for reliable resonance frequencies
Chris Stoeckel, Fraunhofer ENAS, DE

System reliability as a key for managing complex requirements, such as robust design of microsystems
Stefan Straube, Fraunhofer IZM, DE

Bio-Chemical-Sensors Array Impedance Spectroscopy Chip
Prof. Drago Strle, University of Ljubljana, SI

Integration and fabrication of PZT and metallic glass films for micro-mirror device
Dr. Yao-Chuan Tsai, Tohoku University, JP

Capacitive Silicon-Microphone and its mechanical and electro-acoustical properties
Robert Wieland, Fraunhofer IZM, DE

Adapted printed battery development for driving a smart miniaturised cholesterol sensing system
Dr. Andreas Willert, Fraunhofer ENAS, DE

Through Silicon Via Interposer for 3D Integration
M. Jürgen Wolf, Fraunhofer IZM, DE

Development of a 40 Watts 5 kV converter using Piezoelectric Transformer for Rheo-electrical damper
Yuja Yang, Fraunhofer IZM, DE

2D semiconductors: New innovative platform for the next generation of advanced functional systems
Dr. Serge Zhuiykov, CSIRO, AU

Committee list

Conference chair

Prof. Dr. T. Gessner, Fraunhofer ENAS, DE

Co-chair

Dr. G. Lugert, Siemens, EPoS, DE

Local co-chair

Dr. S. Brongersma, Holst Centre, IMEC, NL

Prof. Dr. P. J. French, Delft University of Technology, NL

Prof. Dr. H. Pereira Neves, IMEC, BE

Prof. Dr. A. van den Berg, University of Twente, NL

Dr. M. van der Beek, Philips Research, NL

Dr. A. van Geelen, EPCOS Netherlands, NL

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Prof. Dr. K. Bock, Fraunhofer EMFT, DE

Prof. Dr. G.-L. Bona, Empa, CH

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B. Courtois, TIMA-CMP, FR

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J. Fjelstad, Verdant Electronics, US

R. H. Grace, R. Grace Associates, US

K. Lightman, MEMS Industry Group, US

Z. Zhou, Tsinghua University Beijing, CN

Members of EPoS advisory committee

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B. Candaele, Thales, FR

S. Coffa, STMicroelectronics, IT

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F. Mullany, Alcatel-Lucent, IE

Dr. R. Neul, Bosch, DE

A. Nguyen-Dinh, Vermon, FR

P. Perlo, Interactive Fully Electrical Vehicle, IT

A. Ripart, Sorin Group, FR

Registration

Registration fees

	Until 08 February 2013	From 09 February 2013
Full conference	995 EUR	1,085 EUR
Full conference university staff and research institutes*	625 EUR	755 EUR
Full conference students	320 EUR	320 EUR
One conference day	590 EUR	650 EUR
Conference dinner	70 EUR	70 EUR
Pre-conference field trip	80 EUR	80 EUR

* University staff, research institute staff and students may only register for the full conference at special rates and must enclose a copy of their university/ research institute ID-card.

For registration on-site a last-minute-fee of 30 EUR becomes due.
All fees plus legal VAT.

Registration terms

Registration for Smart Systems Integration 2013 is binding and only accepted online at www.smartsystemsintegration.com/registration.

Participation fees are due upon registration with payment by credit card (VISA, Master/Eurocard and Amex) via the Saferpay gateway. An invoice for the fees will be issued by mail. Once the registration process is complete, you will receive an email booking confirmation including an entry voucher to the conference, please make sure to bring this along. Your conference documents will be issued on-site at the conference counter.

Cancellations will be accepted in writing only. Cancellations received by Mesago by 08 February 2013 will incur a processing fee of 85 EUR. Thereafter if the participant does not attend, the full fee will be due. If a participant is unable to attend, a substitute can be nominated.

Mesago reserves the right to cancel the conference due to poor bookings or other reasons beyond our control. No further claims beyond the reimbursement of participation fees already paid will be accepted. The program or speakers are subject to change and no claims may be made in this respect.

The conference language is English.

Conference package

The conference fee includes participation in the conference parts booked, proceedings (USB-stick), lunch on the days registered, coffee breaks and free admission to the exhibition, the poster sessions and the special session by EPOSS.

Opening hours registration counter

The conference counter will open 1 hour before the beginning of the conference. Early check-in on Tuesday, 12 March 2013, 13:30 hrs – 15:00 hrs.

Venue

Park Plaza Hotel Amsterdam Airport
Melbournestraat 1
1175 RM Lijnden, the Netherlands
www.parkplaza.com

Accommodation and travel

The Park Plaza Hotel Amsterdam Airport is very well connected to the airport and the central station. Detailed information as well as a list of hotels with special rates is available at www.smartsystemsintegration.com/travel



At a glance

Exhibition

The SSI conference is accompanied by an exhibition.
To have a look at the exhibitors please visit
www.smartsystemsintegration.com/exhibitorlist

Visitors

Pre-registered visitors gain free entry to the exhibition as well as free access to the special sessions by EPoSS and the poster sessions!
Take advantage of the opportunity and register now as visitor at www.smartsystemsintegration.com/tickets



Delegates of MEMS Executive Congress Europe receive 20% discount on the regular conference rate of Smart Systems Integration 2013 and vice versa.

Organizer



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Messe
Frankfurt**

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Co-organizer



Part of the activities of



In cooperation with



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